

Work Order ID 101229
Monday, May 06, 2013 11:55:54 AM

101229

ASAP

Page 1

Item ID: D3238-13

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Plate

Stop

NS2

Start Date: 5/6/2013

Start Qty: 8.00

8

Cust Item ID:

Required Date: 5/8/2013

Req'd Qty: 8.00

8

Customer:

Reference:

Approvals: Process Plan: *MF*

Date: 13-5-6

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D3238	Rev C
-------	-------

100

0.00

8

(DAS)
05
9-09

13.05.06

100

FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

I-Cut as per Dwg D3238 Dwg Rev: C Prog Rev: C 2-
Deburr if necessary

110

QC2- Inspect parts off machine FAI/FAIB

0.00

8

(DAS)
05
9-09

13.05.06

110

QC

Memo

0.00

Quality Control

120

QC8- Inspect parts - second check

0.00

120

QC

Memo

0.00

Quality Control

AS
27
9-09
BS6

8

NCR: Yes / No

DQA: Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____	DISPOSITION				AGAINST DEPARTMENT/PROCESS							
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>							
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>							
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>							
	Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>								
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector			
Doc/Data												
Equip/Tooling												
Operator												
Material												
Setup												
Other												
Process												
Supplier												
Training												
Unapproved												
FAULT CATEGORY												
Landing Gear			General									
Bending	<input type="checkbox"/>		Bend	<input type="checkbox"/>		Grain	<input type="checkbox"/>		Ovalized	<input type="checkbox"/>		Pressure/Forced
Centre Not Concentric to O/S	<input type="checkbox"/>		BOM/Route	<input type="checkbox"/>		Hardware	<input type="checkbox"/>		Over/Under tolerance	<input type="checkbox"/>		Temperature/Cure
Cracks	<input type="checkbox"/>		Broken/Damaged	<input type="checkbox"/>		Inspection Incomplete	<input type="checkbox"/>		Part Incorrect	<input type="checkbox"/>		Weld
Crushed/Crimped	<input type="checkbox"/>		Burrs	<input type="checkbox"/>		Instructions Incomplete/Unclear	<input type="checkbox"/>		Part Lost/Missing	<input type="checkbox"/>		Wrong Stock Pulled
Cuffs	<input type="checkbox"/>		Contamination	<input type="checkbox"/>		Maintenance	<input type="checkbox"/>		Part Moved	<input type="checkbox"/>		
Heat Treat	<input type="checkbox"/>		Countersink	<input type="checkbox"/>		Mislabeled	<input type="checkbox"/>		Positioned Wrong	<input type="checkbox"/>		
Inspection Strip in Tube	<input type="checkbox"/>		Cut Too Short	<input type="checkbox"/>		Misread	<input type="checkbox"/>		Power Loss/Surge	<input type="checkbox"/>		
Ripples in Bend	<input type="checkbox"/>		Drill Holes	<input type="checkbox"/>		Offset	<input type="checkbox"/>			<input type="checkbox"/>		
Torque Waves in Extrusion	<input type="checkbox"/>		Drawing	<input type="checkbox"/>		Out of Calibration	<input type="checkbox"/>			<input type="checkbox"/>		
Turning Sequence	<input type="checkbox"/>		Finish	<input type="checkbox"/>		Out of Sequence	<input type="checkbox"/>			<input type="checkbox"/>		
Wave/Twist in Tube	<input type="checkbox"/>		Folio	<input type="checkbox"/>		Outside Dimensions	<input type="checkbox"/>			<input type="checkbox"/>		

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Page 2

Item ID: D3238-13

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NS2

Start Date: 5/6/2013 Start Qty: 8.00

8

Cust Item ID:

Required Date: 5/8/2013 Req'd Qty: 8.00

8

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

Chemical Conversion Coat per QSI005 4.1

0.00

130

HandFinish

Memo

0.00

8 7613-56

Hand Finishing

140

QC3 Inspect Part Finish

0.00

140

QC

Quality Control

Memo

0.00

DAS
27
1357

8

150

Identify as per dwg & Stock Location 65034 0.00

150

Packaging

Memo

0.00

Packaging

}

8x

SD
13-5-7

NCR: Yes / No

DQA: Date: , ,

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

<p>Work Order: _____</p> <p>Part No. _____</p> <p>NCR No. _____</p>				DISPOSITION		AGAINST DEPARTMENT/PROCESS					
				Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>			
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
<p>Landing Gear</p> <p><input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube</p>				<p>General</p> <p><input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio</p>		<p><input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions</p> <p><input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge</p> <p><input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled</p> <p><input type="checkbox"/> Other</p>					

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Page 3

Item ID: D3238-13

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Setup Start

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Revision ID:

Item Name: Plate

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NS2

Start Date: 5/6/2013 **Start Qty:** 8.00

8

Cust Item ID:

Required Date: 5/8/2013 **Req'd Qty:** 8.00

8

Customer:

Reference:

Approvals: **Process Plan:**

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

**Sequence ID/
Work Center ID**

**Operation
Description**

**Set Up/
Run Hours**

Tool ID

Tool #

**Plan
Code**

**Accept
Qty**

**Reject
Qty**

**Reject
Number**

**Insp.
Stamp**

160

QC21- Final Inspection - Work Order Release

0.00

160

QC

Quality Control

13/5/8 80

13/5/7

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order:				DISPOSITION		AGAINST DEPARTMENT/PROCESS							
Part No.:				Rework	<input type="checkbox"/>	Skid-tube	<input type="checkbox"/>	Crosstube	<input type="checkbox"/>	Water Jet	<input type="checkbox"/>	Engineering	<input type="checkbox"/>
NCR No.:				Scrap	<input type="checkbox"/>	Machining	<input type="checkbox"/>	Small Fab	<input type="checkbox"/>	Prod. Eng. Coor.	<input type="checkbox"/>	Quality	<input type="checkbox"/>
				Use-as-is	<input type="checkbox"/>	Thermoforming	<input type="checkbox"/>	Finishing	<input type="checkbox"/>	Rec/Store/Packaging	<input type="checkbox"/>	Other	<input type="checkbox"/>
				Work Order Update	<input type="checkbox"/>	Large Fab	<input type="checkbox"/>	Composite	<input type="checkbox"/>	Supplier	<input type="checkbox"/>		
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description		Sign & Date	Verification	QC Inspector		
Doc/Data													
Equip/Tooling													
Operator													
Material													
Setup													
Other													
Process													
Supplier													
Training													
Unapproved													
FAULT CATEGORY													
Landing Gear				General									
Bending		Bend		Grain		Ovalized		Pressure/Forced					
Centre Not Concentric to O/S		BOM/Route		Hardware		Over/Under tolerance		Temperature/Cure					
Cracks		Broken/Damaged		Inspection Incomplete		Part Incorrect		Weld					
Crushed/Crimped		Burrs		Instructions Incomplete/Unclear		Part Lost/Missing		Wrong Stock Pulled					
Cuffs		Contamination		Maintenance		Part Moved							
Heat Treat		Countersink		Mislabeled		Positioned Wrong							
Inspection Strip in Tube		Cut Too Short		Misread		Power Loss/Surge							
Ripples in Bend		Drill Holes		Offset									
Torque Waves in Extrusion		Drawing		Out of Calibration									
Turning Sequence		Finish		Out of Sequence									
Wave/Twist in Tube		Folio		Outside Dimensions									

Picklist Print

Monday, May 06, 2013 11:55:53 AM

Page 1

Work Order ID: 101229
Parent Item: D3238-13
Parent Item Name: Plate
Comments: IPP Rev:A New Issue 06-10-20 EC
IPP Rev:B Now on Waterjet 07-01-26 JLM

Start Date: 5/6/2013
Start Qty: 8.00
Required Date: 5/8/2013
Required Qty: 8.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M5052H32S.020 5052-H32 .020 Sheet	6061T6 S 0.020	Purchased		No		100	sf	0.0000	0.012	<u>0.1010526</u>		W/ 13-05-06	

B# 112442

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____		DISPOSITION			AGAINST DEPARTMENT/PROCESS						
Part No. _____		Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Use-as-is <input type="checkbox"/>	Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>		
NCR No. _____		Machining <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Finishing <input type="checkbox"/>	Composite <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>		
Root Cause		Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved											
	FAULT CATEGORY										
	Landing Gear			General							
	Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>					Pressure/Forced		
	Centre Not Concentric to O/S <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>					Temperature/Cure		
	Cracks <input type="checkbox"/>	Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>					Weld		
	Crushed/Crimped <input type="checkbox"/>	Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>					Wrong Stock Pulled		
	Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Part Moved <input type="checkbox"/>							
	Heat Treat <input type="checkbox"/>	Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>							
	Inspection Strip in Tube <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>							
Ripples in Bend <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Offset <input type="checkbox"/>	Other <input type="checkbox"/>								
Torque Waves in Extrusion <input type="checkbox"/>	Drawing <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>									
Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>									
Wave/Twist in Tube <input type="checkbox"/>	Folio <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>									

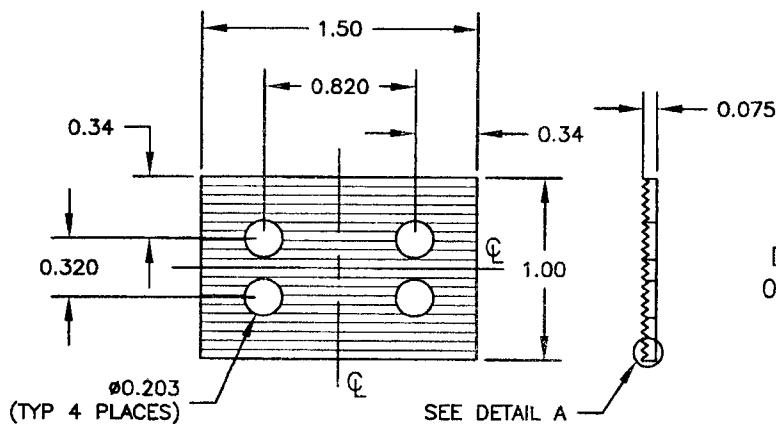
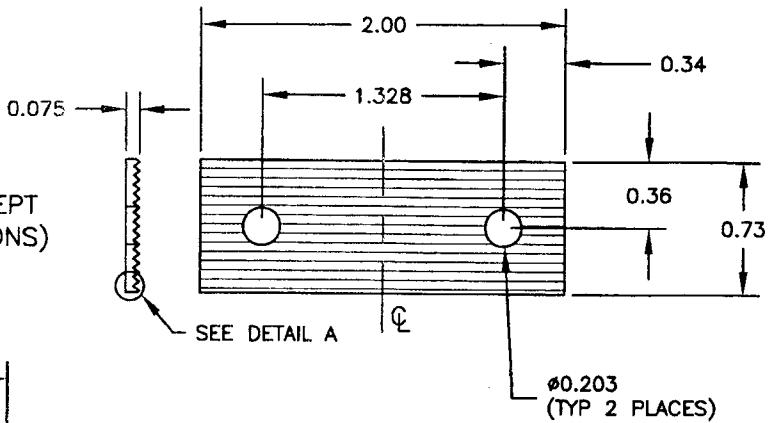
DART

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. C
CE		D3238	SHEET 1 OF 3
DATE		TITLE	SCALE
07.02.19		PLATE	1:1
A	03.11.25	NEW ISSUE	
B	07.01.17	ADD -21/-23/-25/-31/-33/-35; CHANGE -11/-13/-15 TO 6061-T6	
C	07.02.19	ADD 5052-H32 OPTION	

RELEASED

07.02.20 *CB*

D3238-1 PLATE (SHOWN)
D3238-11 PLATE (SAME, EXCEPT
0.020 THICK AND NO SERRATIONS)



D3238-3 PLATE (SHOWN)
D3238-13 PLATE (SAME, EXCEPT
0.020 THICK AND NO SERRATIONS)

NOTES:

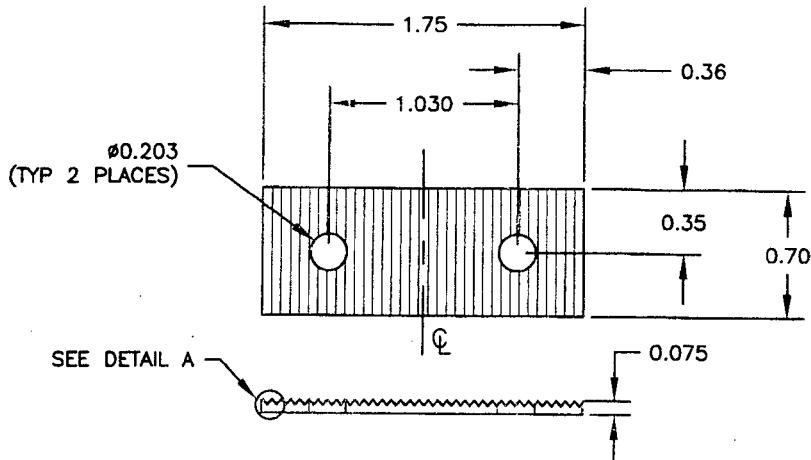
- 1) MATERIAL -1/-3/-5/-21/-23/-25 PLATE:
ALUMINUM 2024-T3 SHEET PER QQ-A-250/4 OR AMS 4037
(REF DART SPEC M2024T3S)
-11/-13/-15/-31/-33/-35 PLATE:
ALUMINUM 6061-T6/-T62 SHEET, 0.020 THICK, PER QQ-A-250/11 OR
AMS 4025 OR AMS 4027 (REF DART SPEC M6061T6S.020)
OR
ALUMINUM 5052-H32 SHEET, 0.020 THICK, PER QQ-A-250/8 OR
AMS 4016 (REF DART SPEC M5052H32S.020)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) SEE SHEET 3 FOR DETAIL A
- 7) PARTS ARE SYMMETRIC ABOUT C

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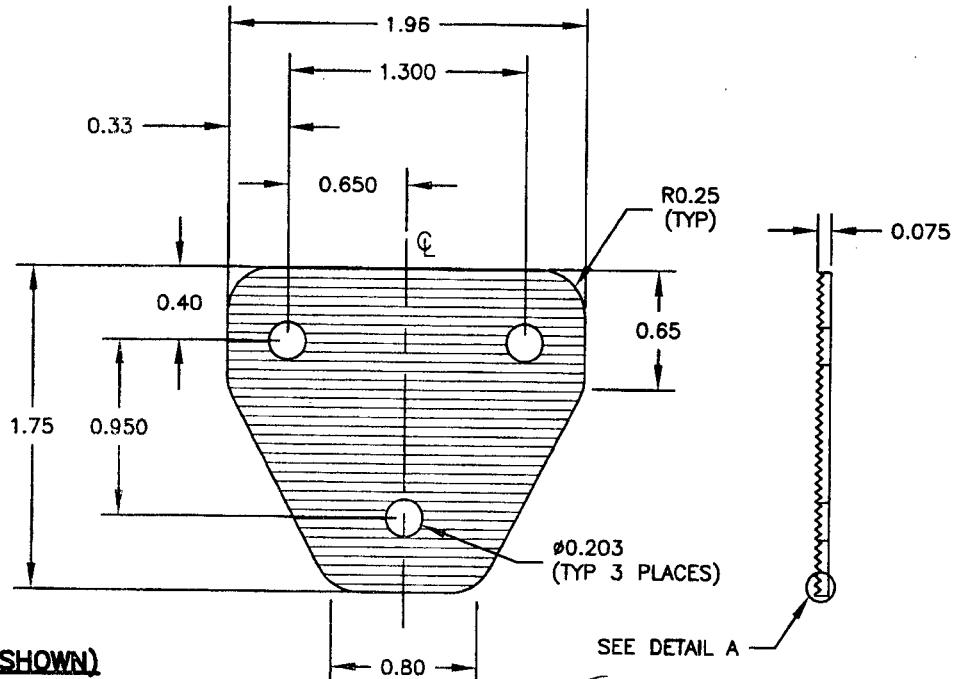
DART

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D3238
DATE		REV. C SHEET 2 OF 3 SCALE 1:1



RELEASED
07.02.20

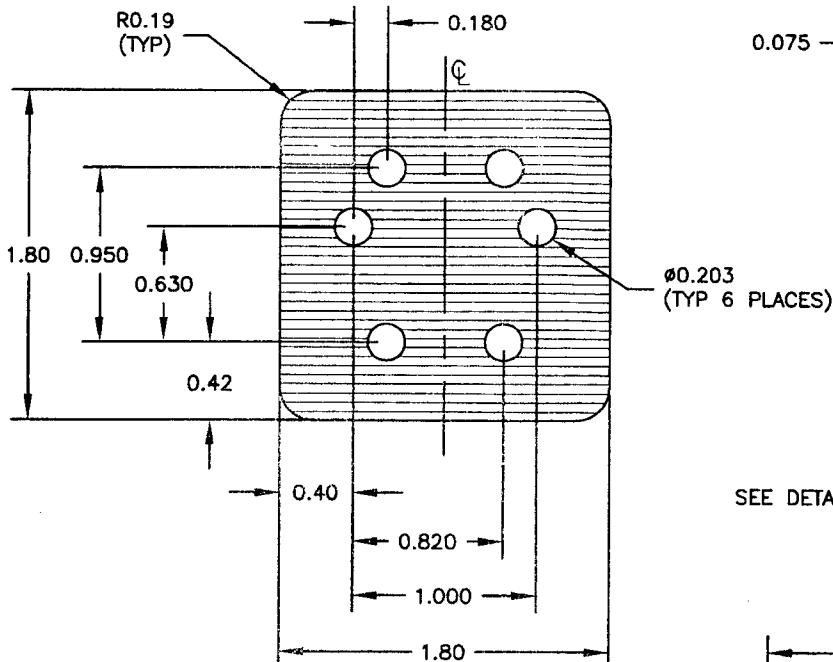
D3238-5 PLATE (SHOWN)
D3238-15 PLATE (SAME, EXCEPT
0.020 THICK AND NO SERRATIONS)



D3238-21 PLATE (SHOWN)
D3238-31 PLATE (SAME, EXCEPT
0.020 THICK AND NO SERRATIONS)



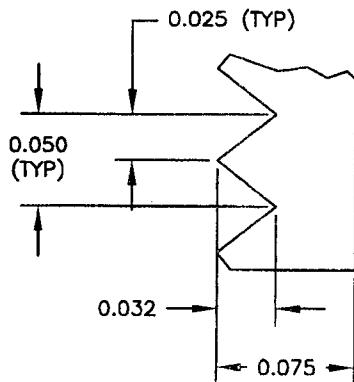
DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D3238
DATE		REV. C SHEET 3 OF 3
07.02.19		SCALE 1:1



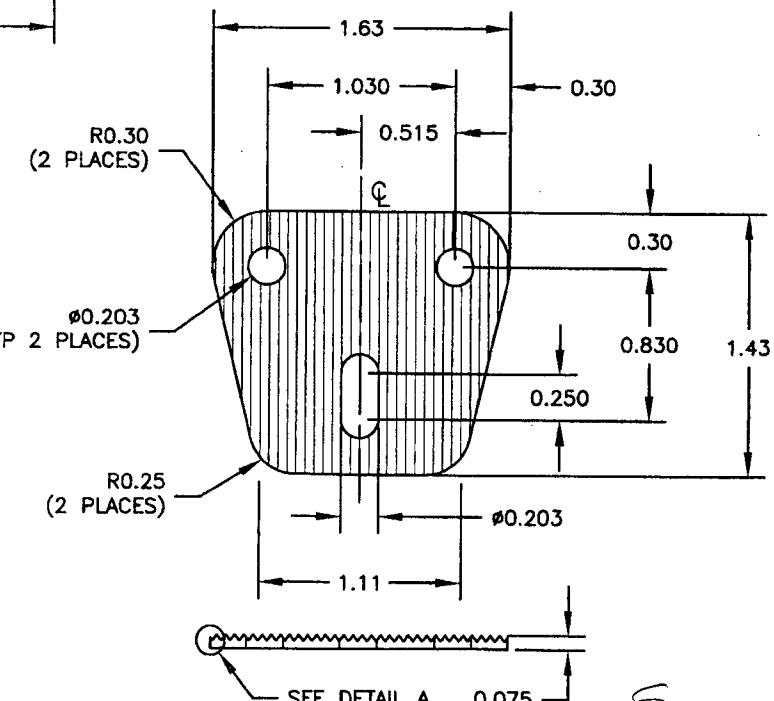
RELEASED

07.02.20

D3238-23 PLATE (SHOWN)
D3238-33 PLATE (SAME, EXCEPT
0.020 THICK AND NO SERRATIONS)



DETAIL A
RIDGE DETAIL (VIEW MAY BE ROTATED)
SCALE 10:1



D3238-25 PLATE (SHOWN)
D3238-35 PLATE (SAME, EXCEPT
0.020 THICK AND NO SERRATIONS)

DART AEROSPACE LTD	Work Order:	101009
Description: Plate	Part Number:	D3238-13
Inspection Dwg: D3238	Rev: C	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

—Gas

27

Measured by:	<i>M. M.</i>	Audited by:	<i>27</i> <i>9-89</i>	Prototype Approval:	N/A
Date:	13.05.06	Date:	<i>1556</i>	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	07.01.17	New Issue	KJ/JLM	
B	07.02.23	Dwg Rev. updated	KJ/JLM	BB